AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A method for forming an electronic device on a substrate, the device including a first electrically conductive region, a second electrically conductive region spaced from the first electrically conductive region and a region of a semiconductor material between the first and second electrically conductive regions and in contact with the first electrically conductive region, the method comprising doping an interfacial zone comprising at least part of the periphery of the semiconductor material at the interface between the semiconductor material and the first electrically conductive region by means of a dopant integral with the first electrically conductive region and capable of doping the semiconductor material so as to thereby enhance the conductivity of the interfacial zone.

2. (original): A method as claimed in claim 1, comprising depositing the first electrically conductive region from a solution including the dopant.

3. (original): A method as claimed in claim 2, wherein the dopant is capable of diffusing from the first electrically conductive region to the interfacial zone so as to dope the interfacial zone.

4. (previously presented): A method as claimed in claim 1, comprising the step of annealing the substrate after the deposition of the first electrically conductive region and the region of semiconductor material.

5. (previously presented): A method as claimed in claim 1, wherein the dopant is an oligomer of an organic molecule comprising an acid functional group.

6. (original): A method as claimed in claim 5, wherein the oligomer is an oligomer of an organic molecule containing a sulphonic acid group.

7. (previously presented): A method as claimed in claim 1, wherein the dopant is a surface active dopant.

8. (original): A method for forming an electronic device as claimed in claim 7, wherein the surface active dopant is a surfactant.

9. (previously presented): A method as claimed in claim 1, comprising:

depositing the first electrically conductive region;

roughening at least part of the surface of the first electrically conductive region; and

depositing the semiconductor material in contact with that part of the surface of the first electrically conductive region.

10. (original): A method as claimed in claim 9, comprising the steps of:

depositing the first electrically conductive region on the substrate from a solution including a conducting material and a polymer; and

exposing the conductive material and the polymer to a solvent in which said polymer is soluble so as to dissolve at least some of the polymer and reveal the conductive material.

11.(previously presented): A method as claimed in claim 1 wherein the first electrically conductive region is deposited from a solution including molecules of an semiconductor material.

12. (previously presented): A method as claimed in claim 1, wherein the first electrically conductive region is deposited from a solution including molecules of a blockcopolymer having one or more electrically conductive blocks and one or more a semiconducting blocks.

13. (previously presented): A method as claimed in claim 1, comprising:

depositing a layer of the dopant on to at least part of the surface of the first electrically conductive region; and

depositing the semiconductor material in contact with that part of the surface of the first electrically conductive region.

14.(original): A method as claimed in claim 13, wherein the layer of the dopant is deposited by polyelectrolyte self-assembly.

15. (previously presented): A method as claimed in claim 1, wherein at least one of the first and second electrically conductive regions comprises an electrically conductive polymer.

16. (previously presented): A method as claimed in claim 1, wherein the electrically conductive polymer is PEDOT/PSS.

17. (previously presented): A method as claimed in claim 1, wherein at least one of the first and second electrically conductive regions comprises a metal deposited from solution.

18. (original): A method as claimed in claim 17, in which the metal is silver, gold, or copper.

19. (previously presented): A method as claimed in claim 1, wherein the semiconductor material is an organic semiconductor.

20. (original): A method as claimed in claim 19, wherein the organic semiconductor is a conjugated polymer.

21. (previously presented): A method as claimed in claim 1 wherein the semiconductor material is an inorganic semiconductor.

22. (original): A method as claimed in claim 21, wherein the inorganic semiconductor is silicon or cadmium selenide.

23. (previously presented): A method as claimed in claim 19, wherein the ionisation potential of the organic semiconductor is less than 5.8eV.

24. (previously presented): A method as claimed in claim 1, wherein the first and second electrically conductive regions constitute electrodes of the electronic device.

25. (previously presented): A method as claimed in claim 1, wherein the electronic device is a switching device.

26. (original): A method as claimed in claim 25 as dependent on claim 24, wherein the switching device is a transistor and the electrodes are source and drain electrodes of the transistor.

27. (previously presented): A method as claimed in claim 1, wherein the semiconductor material remains undoped by the dopant internally of the interfacial zone.

28. (previously presented): A method as claimed in claim 1, wherein the thickness of the peripheral zone is between 1nm and 100 nm.

29. (previously presented): A method as claimed in claim 1, wherein the thickness of the peripheral zone is between 10 nm and 1□m.

30. (previously presented): A method as claimed in claim 1, wherein the thickness of the peripheral zone is between 100nm and 3 □m.

31. (previously presented): A method as claimed in claim 1, wherein the concentration of the dopant in the peripheral zone is higher than $10^{17}cm^{-3}$.

32. (original): An electronic device formed on a substrate and comprising:

a first electrode constituted by a first electrically conductive region;

a second electrode constituted by a second electrically conductive region and spaced away from the first electrode;

a layer of a semiconductor material between the first and second electrodes and in contact with the first electrically conductive region, there being an interfacial zone comprising least part of the periphery of the semiconductor material at the interface between the semiconductor material and the first electrically conductive region in which the semiconductor material is doped by a dopant integral with the first electrically conductive region so as to have a higher electrical conductivity than the interior of the semiconductor material.

33. (original): An electronic device as claimed in claim 32, wherein the semiconductor material is doped by a dopant that is an oligomer of an organic molecule comprising an acid functional group.

34. (original): An electronic device as claimed in claim 33, wherein the oligomer is an oligomer of an organic molecule containing a sulphonic acid group.

35. (previously presented): An electronic device as claimed in claim 32, wherein the dopant is a surface active dopant.

36. (original): An electronic device as claimed in claim 35, wherein the surface active dopant is a surfactant.

37. (previously presented): An electronic device as claimed in claim 32 wherein the first electrically conductive region has a roughened surface at its interface with the semiconductor material.

38. (previously presented): An electronic device as claimed in claim 32, wherein the first electrically conductive region comprises molecules of an organic semiconductor material.

39. (previously presented): An electronic device as claimed in claim 32, wherein the first electrically conductive region comprises molecules of a blockcopolymer having one or more electrically conductive blocks and one or more semiconducting blocks.

40. (previously presented): An electronic device as claimed in claim 32, comprising a layer of the dopant between the first electrically conductive region and the semiconductor material.

41. (previously presented): An electronic device as claimed in claim 32, wherein at least one of the first and second electrically conductive regions comprises an electrically conductive polymer.

42. (original): An electronic device as claimed in claim 41, wherein the electrically conductive polymer is PEDOT/PSS.

43. (previously presented): An electronic device as claimed in claim 32, wherein at least one of the first and second electrically conductive regions comprises a metal deposited from solution.

44. (original): An electronic device as claimed in claim 43, in which the metal is silver, gold, or copper.

45. (previously presented): An ~~method~~ electronic device as claimed in claim 32, wherein the semiconductor material is an organic semiconductor.

46. (original): An electronic device as claimed in claim 45, wherein the semiconductor material is a conjugated polymer.

47. (currently amended): An ~~method~~ electronic device as claimed in claim 32 wherein the semiconductor material is an inorganic semiconductor.

48. (currently amended): An ~~method~~ electronic device as claimed in claim 47, wherein the inorganic semiconductor is silicon or cadmium selenide.

49. (previously presented): An electronic device as claimed in claim 32, wherein the ionisation potential of the conjugated polymer is less than 5.8eV.

50. (previously presented): An electronic device as claimed in claim 32, wherein the electronic device is a switching device.

51. (previously presented): An electronic device as claimed in claim 32, wherein the switching device is a transistor and the electrodes are source and drain electrodes of the transistor.

52.(previously presented): An electronic device as claimed in claim 32, wherein the semiconductor material remains undoped by the dopant internally of the interfacial zone.

53. (previously presented): An electronic device as claimed in claim 32, wherein the thickness of the peripheral zone is between 1nm and 100nm

54.(previously presented): An electronic device as claimed in claim 32, wherein the thickness of the peripheral zone is between 10 nm and 1□m.

55. (previously presented): An electronic device as claimed in claim 32 or 54, wherein the thickness of the peripheral zone is between 100nm and 3 □m.

56. (previously presented): An electronic device as claimed in claim 32, wherein the concentration of the dopant in the peripheral zone is higher than $10^{17}cm^{-3}$.